CLAIMS

1. Use of a preparation of an active enamel substance for the preparation of a pharmaceutical or cosmetic composition for healing of a wound.

2. Use of a preparation of an active enamel substance for the preparation of a pharmaceutical or cosmetic composition for improving healing of a wound.

3. Use of a preparation of an active enamel substance for the preparation of a pharmaceutical or cosmetic composition for soft tissue regeneration or repair.

4. Use according to any of claims 1-3, wherein the wound is present in the oral cavity.

5. Use according to any of claims 1-3, wherein the wound is a bodily injury or a trauma associated with oral surgery including periodontal surgery, tooth extraction(s), endodontic treatment, insertion of tooth implants, application and use of tooth prothesis.

6. Use according to any of claims 1-3, wherein the wound is selected from the group consisting of aseptic wounds, contused wounds, incised wounds, lacerated wounds, non-penetrating wounds, open wounds, penetrating wounds, perforating wounds, puncture wounds, septic wounds, infarctions and subcutaneous wounds.

7. Use according to any of claims 1-3, wherein the wound is selected from the group consisting of ischemic ulcers, pressure sores, fistulae, severe bites, thermal burns and donor site wounds.

8. Use according to any of claims 1-4, wherein the wound is an aphthous wound, a traumatic wound or a herpes associated wound.

9. Use of a preparation of an active enamel substance for the preparation of a pharmaceutical composition for the prevention and/or treatment of an infection.

10. Use according to claim 9, wherein the infection is caused by a microorganism.

11. Use according to claim 9 or 10 for the prevention of or treatment of bacterial growth on a mucosal surface.

12. Use according to claim 9 or 10 for the prevention of or treatment of bacterial growth on a nail or a tooth surface.

13. Use according to claim 9 or 10, wherein the infection is present in the oral cavity.

14. Use according to claim 13 for the prophylaxis and/or treatment of a bacterial condition in the oral cavity.

15. Use according to any of claims 9-14, wherein the infection is caused by bacteria causing caries, e.g. *Streptococcus mutans*; bacteria causing periodontal disease e.g. *Actinobacillus actinomycetemcomitans, Porphyromonas gingivalis, Prevotella intermedia, Peptostreptococcus micros, Campylobacter (Fusobacteria, Staphylococci), B. forsythus*; bacteria causing alveolitis etc., e.g. *Staphylococcus, Actinomyces* and *Bacillus*; and bacteria causing periapical lesions, e.g. *Spirochetes*.

16. Use according to any of claims 9-11, wherein the bacteria are present on the skin.

17. Use of a preparation of an active enamel substance for the preparation of a pharmaceutical composition for the prevention and/or treatment of an inflammatory condition.

18. Use according to claim 17, wherein the inflammatory condition is present in the oral cavity.

19. Use according to claim 17, wherein the inflammatory condition is present in a bone donor site.

20. Use according to any of the preceding claims, wherein the active enamel substance is enamel matrix, enamel matrix derivatives and/or enamel matrix proteins.

21. Use according to any of the preceding claims, wherein the active enamel substance is selected from the group consisting of enamelins, amelogenins, non-amelogenins, proline-rich non-amelogenins, amelins (ameloblastin, sheathlin), tuftelins, and derivatives thereof and mixtures thereof.

22. Use according to any of the preceding claims, wherein the active enamel substance has a molecular weight of at the most about 120 kDa such as, e.g., at the most 100 kDa, 90 kDa, 80 kDa, 70 kDa or 60 kDa as determined by SDS Page electrophoresis.

23. Use according to any of the preceding claims, wherein the preparation of an active enamel substance contains a mixture of active enamel substances with different molecular weights.

24. Use according to any of the preceding claims, wherein the preparation of an active enamel substance comprises at least two substances selected from the group consisting of amelogenins, proline-rich non-amelogenins, tuftelin, tuft proteins, serum proteins, salivary proteins, amelin, ameloblastin, sheathlin, and derivatives thereof.

25. Use according to any of the preceding claims, wherein the active enamel substance has a molecular weight of up to about 40,000.

26. Use according to any of the preceding claims, wherein the active enamel substance has a molecular weight of between about 5,000 and about 25,000.

27. Use according to any of the preceding claims, wherein the major part of the active enamel substance has a molecular weight of about 20 kDa.

28. Use according to any of the preceding claims, wherein at least a part of the active enamel substance is in the form of aggregates or after application in vivo is capable of forming aggregates.

29. Use according to claim 26, wherein the aggregates have a particle size of from about 20 nm to about 1 µm.

30. Use according to any of the preceding claims, wherein the protein content of the active enamel substance in the preparation is in a range of from about 0.05% w/w to 100% w/w such as, e.g., about 5-99% w/w, about 10-95% w/w, about 15-90% w/w, about 20-90% w/w, about 30-90% w/w, about 40-85% w/w, about 50-80% w/w, about 60-70% w/w, about 70-90% w/w, or about 80-90% w/w.

31. Use according to any of the preceding claims, wherein the pharmaceutical composition further comprises a pharmaceutically acceptable excipient.

32. Use according to claim 31, wherein the pharmaceutically acceptable excipient is propylene glycol alginate.

33. Use according to claim 31, wherein the pharmaceutically acceptable excipient is hyaluronic acid or salts or derivatives thereof.

34. Use according to any of claims 1-33 of EMDOGAIN® or any proteins or peptides contained therein for wound healing.

35. A method of improving the healing of a wound, the method comprising administering to a mammal in need thereof a prophylactically or therapeutically effective amount of an active enamel substance.

36. A method according to claim 35, wherein the wound is a bodily injury or a trauma associated with oral surgery including periodontal surgery, tooth extraction(s), endodontic treatment, insertion of tooth implants, application and use of tooth prothesis; or wherein the wound is selected from the group consisting of aseptic wounds, contused wounds, incised wounds, lacerated wounds, non-penetrating wounds, open wounds, penetrating wounds, perforating wounds, puncture wounds, septic wounds, infarctions and subcutaneous wounds; or wherein the wound is selected from the group consisting of ischemic ulcers, pressure sores, fistulae, severe

bites, thermal burns and donor site wounds; or wherein the wound is an aphthous wound, a traumatic wound or a herpes associated wound.

37. A method according to claim 36, wherein wherein the active enamel substance is selected from the group consisting of enamelins, amelogenins, non-amelogenins, proline-rich non-amelogenins, amelins (ameloblastin, sheathlin), tuftelins, and derivatives thereof and mixtures thereof.

38. A method according to claim 36, wherein the active enamel substance has a molecular weight of at the most about 120 kDa such as, e.g., at the most 100 kDa, 90 kDa, 80 kDa, 70 kDa or 60 kDa as determined by SDS Page electrophoresis.

39. A method according to claim 36, wherein the amount of active enamel substance applied on the wound is an amount of total protein per cm^2 corresponding to from about 0.01mg/cm^2 to about 20 mg/cm^2, such as from about 0.1 mg/cm^2 to about 15 mg/cm^2.

40. A method of promoting soft tissue regeneration and/or repair, the method comprising administering to a mammal in need thereof a prophylactically or therapeutically effective amount of an active enamel substance.

41. A method according to claim 40, wherein wherein the active enamel substance is selected from the group consisting of enamelins, amelogenins, non-amelogenins, proline-rich non-amelogenins, amelins (ameloblastin, sheathlin), tuftelins, and derivatives thereof and mixtures thereof.

42. A method according to claim 40, wherein the active enamel substance has a molecular weight of at the most about 120 kDa such as, e.g., at the most 100 kDa, 90 kDa, 80 kDa, 70 kDa or 60 kDa as determined by SDS Page electrophoresis.

43. A method according to claim 40, wherein the amount of active enamel substance applied on the wound is an amount of total protein per cm^2 of affected tissue surface corresponding to from about 0.01mg/cm^2 to about 20 mg/cm^2, such as from about 0.1 mg/cm^2 to about 15 mg/cm^2.

44. A method of preventing or treating an infection, the method comprising administering to a mammal in need thereof a prophylactically or therapeutically effective amount of an active enamel substance.

45. A method according to claim 44, wherein wherein the active enamel substance is selected from the group consisting of enamelins, amelogenins, non-amelogenins, proline-rich non-amelogenins, amelins (ameloblastin, sheathlin), tuftelins, and derivatives thereof and mixtures thereof.

46. A method according to claim 44, wherein the active enamel substance has a molecular weight of at the most about 120 kDa such as, e.g., at the most 100 kDa, 90 kDa, 80 kDa, 70 kDa or 60 kDa as determined by SDS Page electrophoresis.

47. A method according to claim 44, wherein the infection is a bacterial infection of the skin or a mucosal surface.

48. A method according to claim 44, wherein the bacterial infection is an infection of the oral cavity.

49. A method according to claim 48, wherein the infection is caused by bacteria causing caries, e.g. *Streptococcus mutans*; bacteria causing periodontal disease e.g. *Actinobacillus actinomycetemcomitans, Porphyromonas gingivalis, Prevotella intermedia, Peptostreptococcus micros, Campylobacter (Fusobacteria, Staphylococci), B. forsythus*; bacteria causing alveolitis etc., e.g. *Staphylococcus, Actinomyces* and *Bacillus*; and bacteria causing periapical lesions, e.g. *Spirochetes*.

50. A method of preventing or treating an inflammatory condition, the method comprising administering to a mammal in need thereof a prophylactically or therapeutically effective amount of an active enamel substance.

51. A method according to claim 50, wherein wherein the active enamel substance is selected from the group consisting of enamelins, amelogenins, non-amelogenins, proline-rich non-amelogenins, amelins (ameloblastin, sheathlin), tuftelins, and derivatives thereof and mixtures thereof.

52. A method according to claim 50, wherein the active enamel substance has a molecular weight of at the most about 120 kDa such as, e.g., at the most 100 kDa, 90 kDa, 80 kDa, 70 kDa or 60 kDa as determined by SDS Page electrophoresis.

53. A method according to claim 50, wherein the amount of active enamel substance applied on the wound is an amount of total protein per cm^2 of affected tissue surface corresponding to from about 0.01 mg/cm^2 to about 20 mg/cm^2, such as from about 0.1 mg/cm^2 to about 15 mg/cm^2.